



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,243	01/21/2004	Kia Silverbrook	MPA12US	1580

24011 7590 11/24/2006

SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, NSW 2041
AUSTRALIA

EXAMINER

MARTIN, LAURA E

ART UNIT	PAPER NUMBER
----------	--------------

2853

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/760,243	Applicant(s) SILVERBROOK ET AL.	
	Examiner Laura E. Martin	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al (US 6439908) in view of Silverbrook (US 2002080834).

Silverbrook et al. discloses the following claim limitations:

As per claim 1: at least two printhead modules (figure 15, element 10) each comprising at least two printhead integrated circuits (figure 5, element 18), each of which have nozzles formed therein for delivering printing fluid onto the surface of print media (column 3, lines 45-47), and a support member commonly supporting the printhead integrated circuits of the respective printhead module (figure 3, element 32); and a casing in which the at least two printhead modules are removably mounted (column 5, lines 30-37 and figure 2, elements 14, 64, lower 76 and 94), at least one longitudinally extending channel, and at least one fluid connector is provided to connect at least one printing fluid delivery hose from a printing fluid supply to the at least one channel of the support member mounted to the longitudinal end of the printhead module (figure 12, element 78).

As per claim 3: a sealing adhesive is provided at the interface of the interconnect of at least one fluid connector and printhead module (column 3, line 65-column 4, line 6).

As per claim 5: the at least one fluid connector has at least one tubular portion for connecting with the at least one fluid delivery hose and the at least one tubular portion is arranged to be in fluid connection with the at least one channel per printhead module (figure 12, element 78).

As per claim 6: the at least one tubular portion is arranged so as to form a linear fluid connection with the at least one first channel (column 7, lines 5-15).

As per claim 7: two fluid connectors are provided (figure 3, element 42), one connected at each longitudinal end of the mounted printhead modules, for providing fluid supply from both ends of each channel (figure 3).

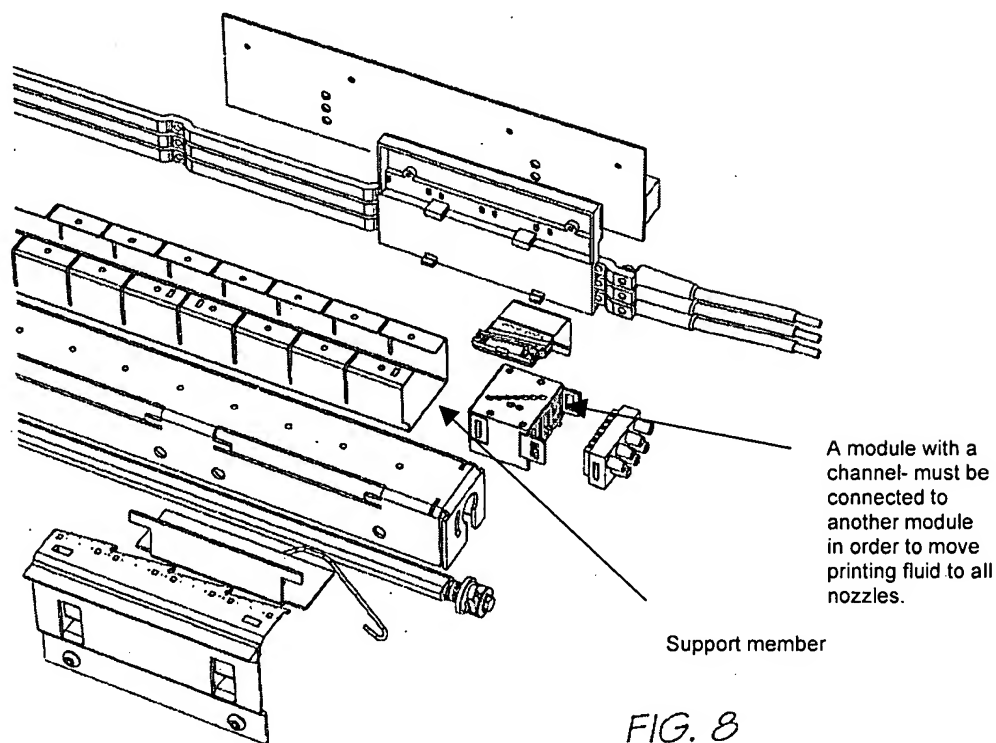
As per claim 8: each printhead module is formed as a unitary arrangement of at least two printhead integrated circuits (figure 2, element 18), the support member (figure 3, element 32), at least one distribution member (figure 8, element 72), and an electrical connector (column 3, lines 59-65) for connecting electrical singles to the at least two printhead integrated circuits; and each support member has a plurality of apertures (figure 8, element 72) extending through a wall of the support member arranged so as to direct the printing fluid from the respective channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (column 4, lines 41-44).

Silverbrook et al. does not disclose the following claim limitations:

As per claim 1: each support member has at least one longitudinally extending channel for carrying the printing fluid for the printhead integrated circuits which is configured to communicate said printing fluid with the channel of the adjacent support member.

Silverbrook discloses the following claim limitations:

As per claim 1: each support member has at least one longitudinally extending channel for carrying the printing fluid for the printhead integrated circuits which is configured to communicate said printing fluid with the channel of the adjacent support member (see figure 8 below).



It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printhead assembly of Silverbrook et al. with the disclosure of Silverbrook in order to provide a higher quality printhead assembly.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al (US 6439908) and Silverbrook (US 20020140954), and further in view of Milan (US 5658158).

Silverbrook et al. as modified discloses a printhead assembly with female end portions in which the at least one fluid connector is arranged to interconnect (column 7, lines 5-15); however, it does not disclose each support member having a complementary male and female end portion.

Milan discloses complementary end portions (figures 1 and 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printhead taught by Silverbrook et al. as modified with the disclosure of Milan in order to create an apparatus with easy assembly and disassembly.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al (US 6439908) and Silverbrook (US 20020140954), and further in view of Lu et al. (US 20030007042).

Silverbrook et al. as modified teaches a printhead assembly with a sealing adhesive (column 3, lines 65-column 4, line 5); however, it does not disclose the sealing adhesive being epoxy.

Lu et al. teaches sealing adhesive being epoxy [0002].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Silverbrook et al. as modified with the disclosure of Lu et al. in order to create a higher quality printhead.

Response to Arguments

Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone

Art Unit: 2853

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin

 11/21/06
MANISH S. SHAH
PRIMARY EXAMINER